ABSTRACT

This invention relates generally to a method for producing self-assembled objects comprising single-wall carbon nanotubes (SWNTs) and compositions thereof. In one embodiment, the present invention involves a three-dimensional structure of derivatized single-wall nanotube molecules that spontaneously form. It includes several component molecule having multiple derivatives brought together to assemble into the three-dimensional structure. In another embodiment, objects may be obtained by bonding functionally-specific agents (FSAs) groups of nanotubes into geometric structures. The bond selectivity of FSAs allow selected nanotubes of a particular size or kind to assemble together and inhibit the assembling of unselected nanotubes that may also be present.